ocean dumping of dredged material in the Humboldt Bay region. However, in all cases, the disposition of dredged materials from individual projects will be evaluated by EPA Region IX and the Corps' San Francisco District on a caseby-case basis, taking into account all the alternatives available at the time of permitting. Beneficial reuse alternatives will be preferred over ocean disposal whenever they are practicable and would cause less adverse impacts than ocean disposal.

The following ocean disposal alternatives were evaluated in the Final EIS:

1. No Action—Failure to designate a permanent ocean disposal site pursuant to section 102 of the MPRSA would have significant negative consequences. First, the continued foreseeable need to have an appropriate site for disposal of suitable sediments from various Humboldt Bay dredging projects would place pressure on the Corps and EPA to approve on a project-by-project basis the use of existing or temporary ocean dumping locations pursuant to MPRSA section 103. This could result in: increased cumulative effects if multiple disposal sites were used over time; projects delays (with potential navigation and human safety consequences); and the inefficient expenditure of limited government resources on multiple site designation actions and monitoring programs over time. Second, the Water Resources Development Act of 1992 prohibits the continued use of ocean dump sites which have not been designated by EPA as section 102 dump sites by January 1, 1997. If EPA fails to designate an ocean dredged material disposal site for the Humboldt Bay area by that date, then ocean disposal of dredged materials taken from Humboldt Bay projects will be effectively precluded under section 102 of the MPRSA.

2. Upland Disposal—Several upland sites were considered for disposal of dredged materials from Humboldt Bay, including the "Superbowl" site which was originally designed to contain approximately 1 million cubic yards of dredged material. EPA has eliminated the "Superbowl" site from further consideration in the Final EIS because of the nearby presence of an endangered plant species (Erysium menziesii, or Menzie's Wallflower) and the small capacity of the site relative to the needs of harbor maintenance and new work dredging over a 50-year period. Other land disposal sites were also considered, as described in the Final EIS, but were not investigated in detail because of the potential for adverse impacts on wetlands, inadequate

capacity, and/or conflicts with other land uses.

Beach Nourishment—This disposal alternative was considered because much of the sediment dredged from the Humboldt Bay region is sand. (Sediments dredged from the Bar and Entrance, North Bay Channels, and the Field's Landing Channel in the area north of Buhne Point are predominately medium- to fine-grained sand. However, sediments in the southern reach of the Field's Landing Channel and the Samoa and Eureka Channels have historically been finer-grained material that would not be suitable for beach nourishment.) EPA has eliminated this alternative from further consideration for these areas because the dredging and disposal operations are not expected to be practicable for all of the material generated in the region. Stationary dredging plants cannot be used in the entrance and main channel areas because of exposure to rough sea conditions. Use of a hopper dredge would require rehandling which would result in adverse localized (in-bay) environmental impacts. The dredged sediments would be deposited at a sheltered in-bay site by hopper dredge (effects on in-bay biota), and hydraulically re-dredged for transport by slurry pipeline to the North or South Spit beach sites. Dredging and nearshore disposal directly via hopper dredge without rehandling is discussed below. This alternative would have greater overall adverse impacts than the preferred alternative (HOODS). (Note that EPA and the Corps may still determine that beach nourishment is the preferable alternative for individual projects on a case-by-case basis.)

Disposal off the Continental Shelf— The EPA Ocean Dumping Regulations (40 CFR 228.5(e)) state that the EPA will, whenever feasible, designate ocean dumping sites beyond the edge of the continental shelf and/or at sites that have been historically used (to minimize cumulative effects). Disposal off the continental shelf would require use of a site located 10 nautical miles (19 kilometers) or farther from Humboldt Bay. The Corps has determined that the Zone of Siting Feasibility (ZSF-the radius limit for economically feasible disposal operations for the Humboldt Bay area) is 4 nautical miles from the entrance to Humboldt Bay. EPA has therefore eliminated alternatives off the continental shelf because they would be outside the ZSF, and because historical disposal sites exist on the continental shelf within the ZSF.

5. Nearshore Disposal Site (NDS)— This alternative site is located

approximately 2 nautical miles (4 kilometers) southwest of the Humboldt Harbor mouth. Two disposal episodes occurred at this site as part of a study to determine whether sediments discharged at the NDS would remain in the littoral zone and promote beach nourishment. The study indicated some shoaling and some evidence of shoreward transport. EPA has eliminated this alternative from further consideration because, while it provides a potential beneficial reuse of sandy sediments, there has been strong objection by local fishermen's groups to the use of this site based on adverse impacts on navigational safety in the vicinity of the southern approach to the Humboldt Harbor entrance channel and on commercial fishery resources that inhabit the nearshore area. These resources include egg-brooding Dungeness crab, juvenile Dungeness crab, and juvenile English sole. This alternative would have greater overall adverse impacts than the preferred alternative (HOODS)

6. Disposal Site SF-3—This alternative disposal site is located approximately 1 nautical mile (2 kilometers) southwest of the Humboldt Harbor mouth. This site has been used previously by the Corps for disposal of dredged material from Humboldt Bay. This site was de-designated as an interim site on December 31, 1988, although it had been used subsequently under authority of the provisions of section 103 of the MPRSA. EPA has eliminated this alternative from further consideration because of concerns about adverse impacts on safe navigation and on commercial and recreational fisheries. This site would have greater overall adverse impacts than the preferred alternative (HOODS).

7. Humboldt Open Ocean Disposal Site (HOODS)—The Final EIS identified this alternative site as the preferred alternative based on comparison to the alternative sites listed above, and to the specific selection criteria listed in 40 CFR 228.6(a). The HOODS is located furthest from the coast (between approximately 3 and 4 nautical miles west of the Humboldt Bay entrance) and in the deepest depth range (approximately 160 to 180 feet, or 49 to 55 meters). The 1 square nautical mile (3 square kilometer) site represents an extremely small area relative to the extent of similar habitat in the surrounding region. Bathymetric and sediment surveys indicate the HOODS is located in a depositional area which is likely to retain dredged material deposited on the sea floor. No significant impacts to other resources or amenity areas are expected to result